

Written Amendment

(Amendment in accordance with Article 11 of The Law Concerning International Applications, etc.,
Pursuant to the Patent Cooperation Treaty)

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4. Document to be Amended

Claims

5. Contents of Amendment

- (1) Claim 1 on page 51 was amended.
- (2) Claim 3 on page 51 was amended.

6. List of Attached Documents

- (1) Claims on pages 51 and 51/1

CLAIMS

1. (Amended) A cathode material for a secondary battery containing a cathode active material represented by a general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) as a primary component, one or more metal elements selected from the group consisting of metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table, the total content of which is in the range of 0.1 to 5 mol%, in terms of element ratio, based on iron in the cathode active material, and a halogen element in an amount of 0.1 mol% or more based on P.
2. The cathode material for a secondary battery according to claim 1, wherein the metal elements are one or more metal elements selected from the group consisting of vanadium (V), chromium (Cr), copper (Cu), zinc (Zn), indium (In), tin (Sn), molybdenum (Mo), and titanium (Ti).
3. (Amended) The cathode material for a secondary battery according to claim 1 or 2, wherein the halogen element is in an amount of 0.1 mol% or more based on P and in a molar concentration of up to twice that of the metal element or elements.
4. A cathode material for a secondary battery synthesized so as to contain a cathode active material represented by a general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) as a primary component and one or more metal elements selected from the group consisting of metal elements belonging to Group 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table by mixing a halide or halides of the metal element or elements and the ingredients of the cathode active material represented by the general formula Li_nFePO_4 (wherein n represents a number from 0 to 1) and calcining the mixture.
5. The cathode material for a secondary battery according to any one of claims 1 to 4, further comprising conductive carbon deposited on the surface thereof.

6. A method for producing a cathode material for a secondary battery comprising the steps of: mixing ingredients of a cathode active material Li_nFePO_4 (wherein n represents a number from 0 to 1), and a halide or halides of one or more metal elements selected from the group consisting of metal elements belonging to Groups 4, 5, 6, 11, 12, 13 and 14 of the Periodic Table to obtain a calcination precursor, and calcining the calcination precursor to composite the cathode active material with the metal element or elements.

7. The method for producing a cathode material for a secondary battery according to claim 6, wherein the calcination step has a first stage in a temperature range of room temperature to $300\text{-}450^\circ\text{C}$ and a second stage in a temperature range of room temperature to the calcination completion temperature, and

wherein the second stage of the calcination step is carried out after addition of a substance from which conductive carbon is formed by pyrolysis to the product of the first stage of the calcination step.